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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/934,713	08/23/2001	Chidane Ouchi	35.G2873	9146

5514 7590 09/09/2004

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EXAMINER

CONNOLLY, PATRICK J

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/934,713	Applicant(s) OUCHI, CHIDANE	
	Examiner Patrick J Connolly	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 is/are allowed.
- 6) ☒ Claim(s) 7, 8 and 10-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

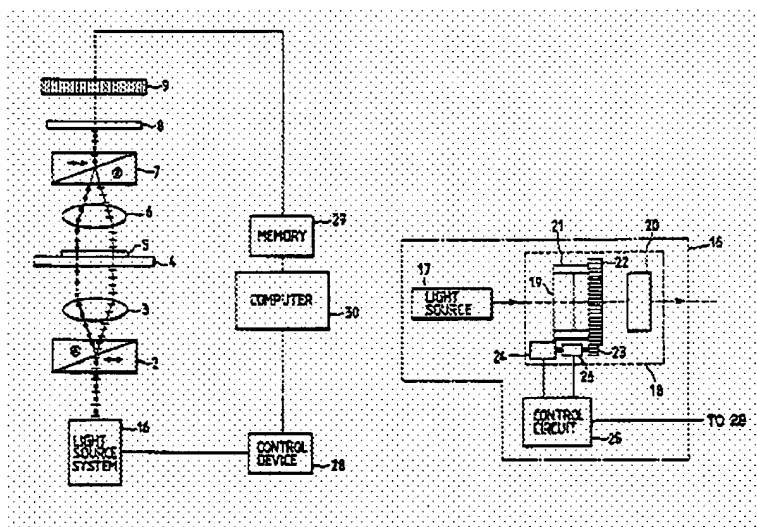
- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10-12 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent No. 5,420,717 to Tabata.

As to claim 10 and 11, Tabata discloses an interferometer including (see Figures 3 and 5 below):



a light source for emitting linearly polarized light (17);

polarization orientation changing means for changing a polarization orientation of the polarized light incident on an object to be measured (18);

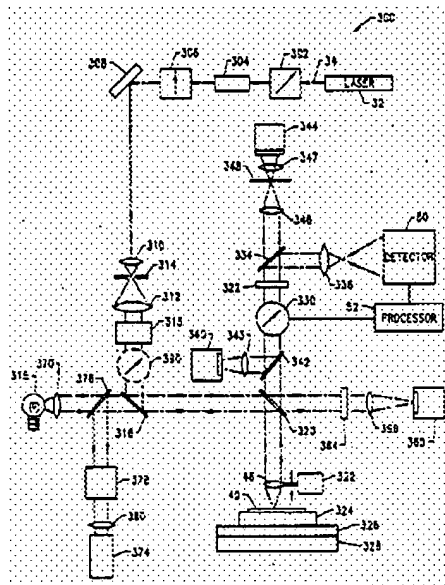
image pick up means (9) for detecting the polarized light after passing through an object to be measured as an interference signal.

calculating means for calculating the average wavefront or retardation of an object to be measured (29, 30, see also columns 5 and 6, discussion of phase distribution).

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Claims 7, 8 and 12 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent No. 5,042,951 to Gold et al (hereafter Gold).

As to claims 7 and 12, Gold discloses an ellipsometric apparatus and method including (see Figure 7, below, see also columns 11-13):



arranging an object to be measured;

measuring of a first linearly polarized light from the object to be measured (via 390, 330, 50);

measuring a wavefront of a second linearly polarized light from the object to be measured wherein the first and second lights are made incident on the object in mutually different orientations (see column 12, lines 9-17); and

calculating the retardation and wavefront of the object on the basis of the measured wavefronts (see column 13, calculation of sample parameters).

As to claim 8, Gold discloses that the rotation of the analyzing filter (330) acts to select the axis with respect to which the light is measured.

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Allowable Subject Matter

Claims 1-6 are allowed.

The following is an examiner's statement of reasons for allowance:

As to claim 1, the prior art of record, taken alone or in combination, fails to disclose or render obvious a measuring device including: polarization orientation setting means for switching the polarization orientation light flux from a light source; analyzing means for switching the polarization orientation so as to allow to pass only the same polarized component as the polarized light incident on the object to be measured; and calculating means for calculating at least one of the average wavefront and the retardation of the object to be measured, on the basis of the wavefront information obtained when using the light in the two polarization states switched by said polarization means, in combination with the rest of the limitations of claim 1.

As to claim 4, the prior art of record, taken alone or in combination, fails to disclose or render obvious a measuring device including: a polarization orientation setting member which has the function of switching the polarization of light flux between at least two orientations; an analyzer, which is disposed on the light incident side of an image pickup member, and which has a function of switching the polarization orientation so as to allow to pass only the same polarized component as the polarized light incident on the object to be measured, out of the interference light fluxes including the light flux which is made to exit from the object to be measured; and a calculating section connected to said image pickup member, said section calculating at least one of the average wavefront and retardation of the object to be measured, on the basis of a measured

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wavefront obtained by the image pickup member, in combination with the rest of the limitations of claim 4.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

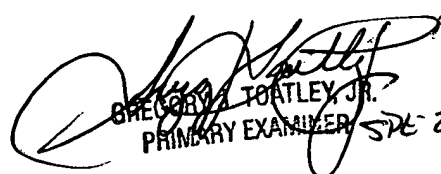
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J Connolly whose telephone number is 571.272.2412. The examiner can normally be reached on 9:00 am - 7:00 pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J Toatley, Jr. can be reached on 571.272.2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

pjcPTC

09.02.2004



GREGORY J. TOATLEY, JR.
PRIMARY EXAMINER
SPR 2877